

IN THE SPECIFICATION:

~~is~~ Please insert the "Sequence Listing" section provided on the separate sheets enclosed herein at the end of the specification.

Please delete the title of the application and replace it with the following:

-- A Truncated Form of Fibrobacter Succinogenes 1,3-1,4-Beta-D-Glucanase With Improved Enzymatic Activity And Thermo-Tolerance-- .

not clear what to do.
Page 10, line 1:

The full-length cDNA of Fs β -glucanase in a DNA template, such as the pJI10 plasmid as used in the preferred embodiment described herein, is amplified and introduced with a *Nco I* and an *EcoR I* restriction enzyme recognition sites at 5' and 3' ends, respectively, by using a PCR-based method. The two primers designed for introducing the *Nco I* and *Eco RI* sites are 5'TCACCACCATGGTTAGCGCAAAG-3'(SEQ ID NO: 7), and 5'GCCACGAATTCTGTTCAAAGTTC AC-3'(SEQ ID NO: 8), respectively. The PCR reaction is performed with a thermo-cycling program as follows: (94 °C, 5 min; 55 °C, 1 min, 72 °C, 1 min for 1 cycle), (94 °C, 1 min; 55 °C, 1 min, 72 °C, 1 min for 30 cycles), (94 °C, 1.5 min; 55 °C, 1.5 min, 72 °C, 10 min for 1 cycle). The resulting amplified DNA fragments are digested with *Nco I* and *Eco RI*, purified, and ligated onto the pET26b (+) vector which is pre-digested with *Nco I* and *Eco RI*. The sequence of Fs β -glucanase can be confirmed by any conventional DNA sequencing methods, such as the chain termination method (Sanger, 1977). In this DNA construct, a *pel B* leading peptide at the N-terminus and extra 19 amino acid residues including 6X-histidine tag at the C-terminus to facilitate protein purification are

included. The recombinant plasmid encoding for the wild-type enzyme is then transformed into *E. coli* BL21 (DE3) host.

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Page 11, line 8-9:

The gene for 1,3-1,4- β -D-glucanase (PCR-TF-glucanase) can be truncated by using a PCR method, which uses Oligo A and Oligo B as a pair of specific primers and the full length cDNA of Fs β -glucanase in pJ110 as template. Oligo A: 5'-CAGCCGGCGATGGCCATGGTTAGCGCA-3' (SEQ ID NO: 9) and oligo B: 5'-CTGCTAGAAGAATTCGGAGCAGGTTCGTC-3' (SEQ ID NO: 10), are designed to amplify both strands of the gene corresponding to the amino acid sequence from methionine 1 to proline 248. The amplified DNA fragments are digested with *Nco I* and *Eco RI* and then ligated with a pET26b (+) vector (purchased from Novagen, WI, USA) which is pre-digested with *Nco I* and *Eco RI*, forming a recombinant plasmid containing a truncated Fs β -glucanase gene. The truncated gene of Fs β -glucanase in the recombinant plasmid can be confirmed by a chain termination DNA sequencing method (Sanger, 1977). In this DNA construct, a *pel B* leading peptide at the N-terminus and an extra 19 amino acid residues with a 6X-histidine tag at the C-terminus with respect to that of TF-glucanase sequence are included. Finally, the plasmid containing the truncated glucanase gene can then be transformed into *E. coli* BL21(DE3) host, purchased from Novagen, WI, USA. Of course, other gene truncation methods or agents may be used satisfactorily.